NOCl 6/30/02

```
=> d que l11
L3             1 SEA FILE=REGISTRY 2696-92-6
L10              SEL  L3 1- CHEM :       10 TERMS
L11           11 SEA FILE=MEDLINE L10/BI
```

Some additional searches for NOCl

NOCl

CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

```
=> s 2696-92-6/thu
          1023 2696-92-6
        447859 THU/RL
L1             1 2696-92-6/THU
                 (2696-92-6 (L) THU/RL)

=> d
```

Only therapeutic use of NOCl using "ROLE" function of Caplus.

```
L1   ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2002 ACS
AN   2001:582316  CAPLUS
DN   135:147442
TI   Treating pulmonary disorders with gaseous agent causing repletion of GSNO
IN   Stamler, Jonathan S.
PA   Duke University, USA
SO   U.S. Pat. Appl. Publ., 7 pp., Cont.-in-part of U.S. Ser. No. 390,215.
     CODEN: USXXCO
DT   Patent
LA   English
FAN.CNT 2
     PATENT NO.         KIND  DATE          APPLICATION NO.  DATE
     ---------------    ----  --------      ---------------  --------
PI   US 2001012834       A1   20010809      US 2001-782077   20010214
     US 6314956          B1   20011113      US 1999-390215   19990908
PRAI US 1999-390215      A2   19990908

=>
```

=> d 1-11 bib ab

L11 ANSWER 1 OF 11 MEDLINE
AN 1999255413 MEDLINE
DN 99255413 PubMed ID: 10320676
TI Nitrite and nitrosyl compounds in food preservation.
AU Cammack R; Joannou C L; Cui X Y; Torres Martinez C; Maraj S R; Hughes M N
CS Division of Life Sciences, King's College, London W8 7AH, UK..
richard.cammack@kcl.ac.uk
SO BIOCHIMICA ET BIOPHYSICA ACTA, (1999 May 5) 1411 (2-3) 475-88. Ref: 116
Journal code: 0217513. ISSN: 0006-3002.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 199906
ED Entered STN: 19990628
Last Updated on STN: 19990628
Entered Medline: 19990614
AB Nitrite is consumed in the diet, through vegetables and drinking water. It is also added to meat products as a preservative. The potential risks of this practice are balanced against the unique protective effect against toxin-forming bacteria such as Clostridium botulinum. The chemistry of nitrite, and compounds derived from it, in food systems and bacterial cells are complex. It is known that the bactericidal species is not nitrite itself, but a compound or compounds derived from it during food preparation. Of a range of nitrosyl compounds tested, the anion of Roussin's black salt [Fe4S3(NO)7]- was the most inhibitory to C. sporogenes. This compound is active against both anaerobic and aerobic food-spoilage bacteria, while some other compounds are selective, indicating multiple sites of action. There are numerous possible targets for inhibition in the bacterial cells, including respiratory chains, iron-sulfur proteins and other metalloproteins, membranes and the genetic apparatus.

L11 ANSWER 2 OF 11 MEDLINE
AN 94283627 MEDLINE
DN 94283627 PubMed ID: 8013660
TI Thermodynamic considerations on the formation of reactive species from hypochlorite, superoxide and nitrogen monoxide. Could **nitrosyl chloride** be produced by neutrophils and macrophages?.
AU Koppenol W H
CS Department of Chemistry, Louisiana State University, Baton Rouge 70803.
NC GM48829 (NIGMS)
SO FEBS LETTERS, (1994 Jun 20) 347 (1) 5-8.
Journal code: 0155157. ISSN: 0014-5793.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199407
ED Entered STN: 19940810
Last Updated on STN: 19940810
Entered Medline: 19940728
AB Hypohalous acids are poor one-electron oxidizing agents, such that reactions with hydrogen peroxide to yield radical species are not feasible. However, the oxidation of superoxide by hypohalous acids can be

a source of hydroxyl or haline radicals. The oxidation of nitrogen monoxide by hypochlorous acid is favourable, but in all likelihood cannot compete with the diffusion-controlled reaction with superoxide to yield peroxynitrite. The reaction of the latter with hypochlorous acid may lead to **nitrosyl chloride**, a strongly oxidizing agent [Eo'(NOCl/NO., Cl) = 1.0 V] that is capable of nitrosylating organic compounds and thereby generating mutagens or promutagens.

L11 ANSWER 3 OF 11 MEDLINE
AN 91190289 MEDLINE
DN 91190289 PubMed ID: 2012683
TI Synergistic effects of air pollutants: ozone plus a respirable aerosol.
AU Last J A
CS Department of Internal Medicine, University of California, Davis.
SO RESEARCH REPORT / HEALTH EFFECTS INSTITUTE, (1991 Jan) (38) 1-32; discussion 33-43.
Journal code: 8812230. ISSN: 1041-5505.
Report No.: NASA-91190289.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Space Life Sciences
EM 199105
ED Entered STN: 19910602
Last Updated on STN: 19910602
Entered Medline: 19910516
AB Rats were concurrently exposed to mixtures of ozone or nitrogen dioxide and respirable-sized aerosols of sulfuric acid, ammonium sulfate, or sodium chloride, or to each pollutant individually. Their responses to such exposures were evaluated by various quantitative biochemical analyses of lung tissue or lavage fluids, or by morphometric analyses. Such studies were performed in the acute time frame, generally involving exposures of from one to nine days, depending on the assays used. Correlations between the biochemical and morphometric results were examined over a wide range of pollutant concentrations in the exposure chambers. Good correlations were found between the most sensitive biochemical indicators of lung damage--the protein content of lung lavage fluid or whole lung tissue and the rate of lung collagen synthesis--and the morphometric estimation of volume density or volume percent of the centriacinar lung lesion characteristically observed in animals exposed to ozone. Synergistic interaction between ozone and sulfuric acid aerosol was demonstrated to occur at environmentally relevant concentrations of both pollutants by several of the analytical methods used. Such interactions were demonstrated at concentrations of ozone as low as 0.12 parts per million (ppm)2 and of sulfuric acid aerosol at concentrations as low as 5 to 20 micrograms/m3. The acidity of the aerosol is a necessary (and apparently a sufficient) condition for such a synergistic interaction between an oxidant gas and a respirable aerosol to occur. A hitherto unexpected synergistic interaction between nitrogen dioxide and sodium chloride aerosol was found during these studies; it is hypothesized that this was due to formation of their acidic (anhydride) reaction product, **nitrosyl chloride**, in the chambers during exposure to the mixture. Preliminary experiments treating exposed animals in vivo with various free-radical scavengers suggested that dimethylthiourea, a hydroxyl-radical scavenger, might be protective against effects of ozone on rat lungs. This observation might have mechanistic implications, but further studies will be necessary to determine the significance of these findings.

L11 ANSWER 4 OF 11 MEDLINE
AN 87320370 MEDLINE
DN 87320370 PubMed ID: 3629590
TI Synergistic interaction between nitrogen dioxide and respirable aerosols of sulfuric acid or sodium chloride on rat lungs.
AU Last J A; Warren D L
NC ES-00628 (NIEHS)
HL-07013 (NHLBI)
RR-00169 (NCRR)
SO TOXICOLOGY AND APPLIED PHARMACOLOGY, (1987 Aug) 90 (1) 34-42.
Journal code: 0416575. ISSN: 0041-008X.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198710
ED Entered STN: 19900305
Last Updated on STN: 19970203
Entered Medline: 19871001
AB We examined interactions in rats between NO2 gas and respirable aerosols of sulfuric acid (H2SO4) or sodium chloride (NaCl). Rats were exposed for 1, 3, or 7 days to 5 ppm of NO2 gas, alone or in combination with 1 mg/m3 of H2SO4 or NaCl aerosols. The apparent rate of collagen synthesis by lung minces was measured after 7 days of exposure, and the protein content of whole lung lavage fluid was measured after 1 or 3 days of exposure. Responses from rats exposed to 5 ppm of NO2 alone were significantly different from controls by these assays. A synergistic interaction was demonstrated between 5 ppm of NO2 and 1 mg/m3 of either H2SO4 or NaCl aerosol as evaluated by measurement of the rate of lung collagen synthesis. A synergistic interaction was also demonstrated by the criterion of increased protein content of lung lavage fluid in rats exposed to 5 ppm of NO2 and 1 mg/m3 of H2SO4 aerosol after 1 day of exposure and between 5 ppm of NO2 and 1 mg/m3 of NaCl aerosol after 3 days of exposure. These observations with 5 ppm of NO2 alone and in combination with 1 mg/m3 of NaCl aerosol support the hypothesis that formation of **nitrosyl chloride** may contribute to a synergistic interaction between NO2 gas and NaCl aerosol. These results suggest that, in general, combinations of oxidant gases with respirable acidic aerosols or with acidogenic gases will demonstrate interactive effects on rat lungs. Such a hypothesis is testable and makes specific predictions about effects of inhalation of pollutant mixtures.

L11 ANSWER 5 OF 11 MEDLINE
AN 83212241 MEDLINE
DN 83212241 PubMed ID: 6853027
TI Partially modified retro-inverso peptides. Comparative Curtius rearrangements to prepare 1,1-diaminoalkane derivatives.
AU Chorev M; Goodman M
NC AM 15410 (NIADDK)
SO INTERNATIONAL JOURNAL OF PEPTIDE AND PROTEIN RESEARCH, (1983 Mar) 21 (3) 258-68.
Journal code: 0330420. ISSN: 0367-8377.
CY Denmark
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198307
ED Entered STN: 19900319
Last Updated on STN: 19970203

Entered Medline: 19830715

AB Several synthetic routes are reported to prepare the hetero diprotected 1,1-diaminoalkanes from N-acylated amino acids or peptides for incorporation into partially modified retro-inverso peptides. The Curtius rearrangement was carried out on the N-protected aminoacyl azides obtained from the N-protected aminoacyl hydrazide by **nitrosyl chloride** or by sodium azide reaction with an appropriate mixed carboxylic carbonic acid anhydride. The resulting isocyanate was allowed to react with alcohol to give a urethane-type protecting group or, via a "one-pot" approach, directly with a carboxyl carrying component to yield the modified (reversed) peptide bond. The carboxyl component can be either an N-acylated amino acid or a malonic acid. The more standard route involves selective deprotection of the 1,1-diaminoalkane residue followed immediately by coupling with a carboxyl component to yield the same modified peptide derivative.

L11 ANSWER 6 OF 11 MEDLINE
AN 80075759 MEDLINE
DN 80075759 PubMed ID: 292815
TI Synthesis of 1-(2-hydroxyethyl)-1-nitrosourea and comparison of its carcinogenicity with that of 1-ethyl-1-nitrosourea.
AU Swenson D H; Frei J V; Lawley P D
SO JOURNAL OF THE NATIONAL CANCER INSTITUTE, (1979 Dec) 63 (6) 1469-73. Journal code: 7503089. ISSN: 0027-8874.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198002
ED Entered STN: 19900315
Last Updated on STN: 19980206
Entered Medline: 19800215

AB 1-(2-Hydroxyethyl)-1-nitrosourea (HNU) was prepared by the action of **nitrosyl chloride** on (2-hydroxyethyl)urea. Attempts to synthesize HNU by an earlier described method were unsuccessful and led to the formation of the cyclized derivative 1-nitroso-2-oxazolidone. In addition, the spectral data that we obtained for HNU differed from those reported earlier. Female C57BL/Cbl mice were treated with single ip doses of HNU to determine its median lethal dose (LD50) and its ability to induce lymphocytic thymic lymphomas in these mice. The results showed that the LD50 was the same as that for 1-ethyl-1-nitrosourea (ENU) and that its was slightly more potent than ENU as a carcinogen in this system.

L11 ANSWER 7 OF 11 MEDLINE
AN 69150583 MEDLINE
DN 69150583 PubMed ID: 5776254
TI Chemistry of cephalosporin antibiotics. XIV. The reaction of cephalosporin C with **nitrosyl chloride**.
AU Morin R B; Jackson B G; Flynn E H; Roeske R W; Andrews S L
SO JOURNAL OF THE AMERICAN CHEMICAL SOCIETY, (1969 Mar 12) 91 (6) 1396-400. Journal code: 7503056. ISSN: 0002-7863.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 196905
ED Entered STN: 19900101
Last Updated on STN: 19900101
Entered Medline: 19690515

L11 ANSWER 8 OF 11 MEDLINE
AN 68124235 MEDLINE
DN 68124235 PubMed ID: 6080113
TI The reaction of **nitrosyl chloride** and of nitryl chloride with 2-cholestene.
AU Terada A; Hassner A
SO BULLETIN OF THE CHEMICAL SOCIETY OF JAPAN, (1967 Aug) 40 (8) 1937-40. Journal code: 7505371. ISSN: 0009-2673.
CY Japan
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 196803
ED Entered STN: 19900101
Last Updated on STN: 19900101
Entered Medline: 19680330

L11 ANSWER 9 OF 11 MEDLINE
AN 66108200 MEDLINE
DN 66108200 PubMed ID: 5866250
TI Photochemical reactions on heterocyclic compounds. I. Nitration of quinoline 1-oxide with **nitrosyl chloride** and n-butyl nitrite.
AU Kosuge T; Yokota M; Sawanishi H
SO CHEMICAL AND PHARMACEUTICAL BULLETIN, (1965 Dec) 13 (12) 1480-1. Journal code: 0377775. ISSN: 0009-2363.
CY Japan
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 196606
ED Entered STN: 19900101
Last Updated on STN: 19900101
Entered Medline: 19660619

L11 ANSWER 10 OF 11 MEDLINE
AN 66099399 MEDLINE
DN 66099399 PubMed ID: 5863920
TI [Inosine-N(1)-oxide nucleotide in complex formation. I. Synthesis of inosine-N(1)-oxide and its 5'-monophosphate from adenosine-N(1)-oxide and its 5'monophosphate by deamination with **nitrosyl chloride**].
Inosin-N(1)-oxid-Nucleotide als Komplexbildner. I. Darstellung von Inosin-N(1)-oxid und dessen 5'-Monophosphat aus Adenosin-N(1)-oxid und dessen 5'-Monophosphat durch Desaminierung mit Nitrosylchlorid.
AU Sigel H; Brintzinger H
SO HELVETICA CHIMICA ACTA, (1965 Apr 20) 48 (3) 433-7. Journal code: 2985094R. ISSN: 0018-019X.
CY Switzerland
DT Journal; Article; (JOURNAL ARTICLE)
LA German
FS Priority Journals
EM 196605
ED Entered STN: 19900101
Last Updated on STN: 19900101
Entered Medline: 19660525

L11 ANSWER 11 OF 11 MEDLINE

AN 66098002 MEDLINE
DN 66098002 PubMed ID: 5863456
TI Studies on acetylenic compounds. XL. The addition reaction of **nitrosyl chloride** and nitryl chloride to acetylenic compounds.
AU Iwai I; Tomita K; Ide J
SO CHEMICAL AND PHARMACEUTICAL BULLETIN, (1965 Feb) 13 (2) 118-29. Journal code: 0377775. ISSN: 0009-2363.
CY Japan
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 196605
ED Entered STN: 19900101
Last Updated on STN: 19900101
Entered Medline: 19660523